

SEQUENCE LISTING

<110> Presnell, Scott R.
 Taft, David W.
 Foley, Kevin P.

<120> Mammalian Transforming Growth Factor Beta - 9

<130> 98-54

<150> 60/100,706

<151> 1998-09-17

<160> 22

<170> FastSEQ for Windows Version 3.0

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<213> Homo sapiens

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<221> CDS

<222> (71)...(676)

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Met Leu Val Ala Gly Phe Leu Leu Ala Leu Pro Pro Ser

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tgg gcc gcg ggc gcc ccg agg gcg ggc agg cgc ccc gcg cgg ccg cgg 157
 Trp Ala Ala Gly Ala Pro Arg Ala Gly Arg Arg Pro Ala Arg Pro Arg

15 20 25

ggc tgc gcg gac cgg ccg gag gag cta ctg gag cag ctg tac ggg cgc 205
 Gly Cys Ala Asp Arg Pro Glu Glu Leu Leu Glu Gln Leu Tyr Gly Arg
 30 35 40 45

ctg gcg gcc ggc gtg ctc agt gcc ttc cac cac acg ctg cag ctg ggg 253
 Leu Ala Ala Gly Val Leu Ser Ala Phe His His Thr Leu Gln Leu Gly
 50 55 60

ccg cgt gag cag gcg cgc aac gcg agc tgc ccg gca ggg ggc agg ccc 301
 Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro
 65 70 75

gcc gac cgc cgc ttc cgg ccg ccc acc aac ctg cgc agc gtg tcg ccc 349
 Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro
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 Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu
 95 100 105

cct gaa gcc tac tgc ctg tgc cgg ggc tgc ctg acc ggg ctg ttc ggc 445
 Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly
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 Glu Glu Asp Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val
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 Val Leu Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr
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 Glu Ala Tyr Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro
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 Glu Lys Asp Ala Asp Ser Ile Asn Ser Ser Ile Asp Lys Gln Gly Ala
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 Lys Leu Leu Leu Gly Pro Asn Asp Ala Pro Ala Gly Pro
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<211> 202

<212> PRT

<213> Homo sapiens

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35      40      45
Gly Val Leu Ser Ala Phe His His Thr Leu Gln Leu Gly Pro Arg Glu
50      55      60
Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro Ala Asp Arg
65      70      75      80
Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala Tyr
85      90      95
Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu Pro Glu Ala
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Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu Asp
115     120     125
Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val Val Leu Arg
130     135     140
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145     150     155     160
Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro Glu Lys Asp
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Ala Asp Ser Ile Asn Ser Ser Ile Asp Lys Gln Gly Ala Lys Leu Leu
180     185     190
Leu Gly Pro Asn Asp Ala Pro Ala Gly Pro
195     200

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 35 40 45
 Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro Ala Asp
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 Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala
 65 70 75 80
 Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu Pro Glu
 85 90 95
 Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu
 100 105 110
 Asp Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val Val Leu
 115 120 125
 Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr Glu Ala
 130 135 140
 Tyr Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro Glu Lys
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 Leu Leu Gly Pro Asn Asp Ala Pro Ala Gly Pro
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 <213> Homo sapiens

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 Gly Val Leu Ser Ala Phe His His Thr Leu Gln Leu Gly Pro Arg Glu
 35 40 45
 Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro Ala Asp Arg
 50 55 60

Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala Tyr
 65 70 75 80
 Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu Pro Glu Ala
 85 90 95
 Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu Asp
 100 105 110
 Val Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val Val Leu Arg
 115 120 125
 Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr Glu Ala Tyr
 130 135 140
 Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro Glu Lys Asp
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<210> 5

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<213> Homo sapiens

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 Val Leu Ser Ala Phe His His Thr Leu Gln Leu Gly Pro Arg Glu Gln
 35 40 45
 Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro Ala Asp Arg Arg
 50 55 60
 Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala Tyr Arg
 65 70 75 80
 Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu Pro Glu Ala Tyr
 85 90 95
 Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu Asp Val
 100 105 110
 Arg Phe Arg Ser Ala Pro Val Tyr Met Pro Thr Val Val Leu Arg Arg
 115 120 125
 Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr Glu Ala Tyr Val
 130 135 140
 Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro Glu Lys Asp Ala
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 Asp Ser Ile Asn Ser Ser Ile Asp Lys Gln Gly Ala Lys Leu Leu Leu
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Gly Pro Asn Asp Ala Pro Ala Gly Pro
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<212> DNA
<213> Mus musculus

<220>
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<222> (79)...(693)

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Met Leu Gly Thr Leu Val Trp Met Leu Ala Val
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Gly Phe Leu Leu Ala Leu Ala Pro Gly Arg Ala Ala Gly Ala Leu Arg
15 20 25

acc ggg agg cgc ccg gcg ccg ccg gac tgc gcg gac cgg ccg gag 207
Thr Gly Arg Arg Pro Ala Arg Pro Arg Asp Cys Ala Asp Arg Pro Glu
30 35 40

gag ctc ctg gag cag ctg tac ggg cgg ctg gcg gcc ggc gtg ctc agc 255
Glu Leu Leu Glu Gln Leu Tyr Gly Arg Leu Ala Ala Gly Val Leu Ser
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 Ala Phe His His Thr Leu Gln Leu Gly Pro Arg Glu Gln Ala Arg Asn
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gcc agc tgc ccg gcc ggg ggc agg gcc gcc gac cgc cgc ttc cgg cca 351
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 Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala Tyr Arg Ile Ser Tyr
 95 100 105

gac cct gct cgc ttt ccg agg tac ctg ccc gaa gcc tac tgc ctg tgc 447
 Asp Pro Ala Arg Phe Pro Arg Tyr Leu Pro Glu Ala Tyr Cys Leu Cys
 110 115 120

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 Arg Gly Cys Leu Thr Gly Leu Tyr Gly Glu Glu Asp Phe Arg Phe Arg
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 160 165 170

gtg ggc tgc acc tgc gtg ccc gag ccg gac aag tcc gcg gac agt gcg 639
 Val Gly Cys Thr Cys Val Pro Glu Pro Asp Lys Ser Ala Asp Ser Ala
 175 180 185

aac tcc agc atg gac aag ctg ctg ctg ggg ccc gcc gac agg cct gcg 687
 Asn Ser Ser Met Asp Lys Leu Leu Leu Gly Pro Ala Asp Arg Pro Ala
 190 195 200

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 Gly Arg
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Ala Arg Pro Arg Asp Cys Ala Asp Arg Pro Glu Glu Leu Leu Glu Gln
35      40      45
Leu Tyr Gly Arg Leu Ala Ala Gly Val Leu Ser Ala Phe His His Thr
50      55      60
Leu Gln Leu Gly Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala
65      70      75      80
Gly Gly Arg Ala Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg
85      90      95
Ser Val Ser Pro Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Phe
100     105     110
Pro Arg Tyr Leu Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr
115     120     125
Gly Leu Tyr Gly Glu Glu Asp Phe Arg Phe Arg Ser Thr Pro Val Phe
130     135     140
Ser Pro Ala Val Val Leu Arg Arg Thr Ala Ala Cys Ala Gly Gly Arg
145     150     155     160
Ser Val Tyr Ala Glu His Tyr Ile Thr Ile Pro Val Gly Cys Thr Cys
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Val Pro Glu Pro Asp Lys Ser Ala Asp Ser Ala Asn Ser Ser Met Asp
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 <211> 22
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22

<210> 12
 <211> 183
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 <213> Mus musculus

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Ala	Gly	Val	Leu	Ser	Ala	Phe	His	His	Thr	Leu	Gln	Leu	Gly	Pro	Arg	35	40	45	
Glu	Gln	Ala	Arg	Asn	Ala	Ser	Cys	Pro	Ala	Gly	Gly	Arg	Ala	Ala	Asp	50	55	60	
Arg	Arg	Phe	Arg	Pro	Pro	Thr	Asn	Leu	Arg	Ser	Val	Ser	Pro	Trp	Ala	65	70	75	80
Tyr	Arg	Ile	Ser	Tyr	Asp	Pro	Ala	Arg	Phe	Pro	Arg	Tyr	Leu	Pro	Glu	85	90	95	
Ala	Tyr	Cys	Leu	Cys	Arg	Gly	Cys	Leu	Thr	Gly	Leu	Tyr	Gly	Glu	Glu	100	105	110	
Asp	Phe	Arg	Phe	Arg	Ser	Thr	Pro	Val	Phe	Ser	Pro	Ala	Val	Val	Leu	115	120	125	
Arg	Arg	Thr	Ala	Ala	Cys	Ala	Gly	Gly	Arg	Ser	Val	Tyr	Ala	Glu	His	130	135	140	
Tyr	Ile	Thr	Ile	Pro	Val	Gly	Cys	Thr	Cys	Val	Pro	Glu	Pro	Asp	Lys	145	150	155	160
Ser	Ala	Asp	Ser	Ala	Asn	Ser	Ser	Met	Asp	Lys	Leu	Leu	Leu	Gly	Pro	165	170	175	
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<210> 13
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 <212> PRT
 <213> Homo sapiens

<400> 13

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			20					25					30		

<210> 14

<211> 21

<212> PRT

<213> Homo sapiens

<400> 14

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			20												

<210> 15

<211> 34

<212> PRT

<213> Homo sapiens

<400> 15

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Gly	Pro														

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<212> DNA

<213> Homo sapiens

<220>

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<222> (572)...(1202)

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Met Leu Gly Ala Leu Val Trp	
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Gly Ala Pro Arg Ala Gly Arg Arg Pro Ala Arg Pro Arg Gly Cys Ala	
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Asp Arg Pro Glu Glu Leu Leu Glu Gln Leu Tyr Gly Arg Leu Ala Ala	
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Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly Arg Pro Ala Asp Arg	
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Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser Val Ser Pro Trp Ala Tyr	
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Arg Ile Ser Tyr Asp Pro Ala Arg Tyr Pro Arg Tyr Leu Pro Glu Ala	
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Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu Asp	
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Ala	Asp	Ser	Ile	Asn	Ser	Ser	Ile	Asp	Lys	Gln	Gly	Ala	Lys	Leu	Leu	
			185				190					195				
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Leu	Gly	Pro	Asn	Asp	Ala	Pro	Ala	Gly	Pro	*						
			200				205									
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 Gly Gly Arg Pro Ala Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg
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 Ser Val Ser Pro Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr
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 Pro Arg Tyr Leu Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr
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 Gly Leu Phe Gly Glu Glu Asp Val Arg Phe Arg Ser Ala Pro Val Tyr
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 Met Pro Thr Val Val Leu Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg
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 Ser Val Tyr Thr Glu Ala Tyr Val Thr Ile Pro Val Gly Cys Thr Cys
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Ala Tyr Cys Leu Cys Arg Gly Cys Leu Thr Gly Leu Phe Gly Glu Glu
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 Arg Arg Thr Pro Ala Cys Ala Gly Gly Arg Ser Val Tyr Thr Glu Ala
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 Tyr Val Thr Ile Pro Val Gly Cys Thr Cys Val Pro Glu Pro Glu Lys
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